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IN THE CLAIMS

Please cancel claims 1-25 without prejudice or disclaimer of their subject matter,
and newly add claims 26-48 as follows:

Claims 1-25. (Canceled)

1 26. (New) An apparatus to process a data call in a private evolution data only
2 wireless network system, the apparatus comprising:

3 a relay unit to relay a unicast access terminal identifier request message in
4 response to a unicast access terminal identifier request message from a terminal entering
5 the private evolution data only wireless network, the unicast access terminal identifier
6 request message including a public network unicast access terminal identifier allocated
7 in a public evolution data only wireless network;

8 a call processing unit to generate a new private evolution data only wireless
9 network unicast access terminal identifier request signal in response to the unicast access
10 terminal identifier request message from the relay unit, and to close a session created at
11 the terminal and the public network according to the received message in response to a
12 received unknown unicast access terminal identifier response message corresponding to
13 the unicast access terminal identifier request signal, and to relay a new unicast access
14 terminal identifier request message from the terminal through the relay unit, the new
15 unicast access terminal identifier request message including random unicast access

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terminal identifier information, and to send an authentication request signal to the connection terminal through the relay unit in response to a private network session being established with the terminal according to a newly allocated unicast access terminal identifier; and

a session information processing unit to send a unicast access terminal identifier response message to the call processing unit in response to the private evolution data only wireless network unicast access terminal identifier request signal from the call processing unit, and to allocate the new unicast access terminal identifier to the connection terminal according to the relayed new unicast access terminal identifier request message from the call processing unit to establish the private evolution data only wireless network session with the terminal, and to then store the established session information in a database thereof.

27. (New) The apparatus according to claim 26, further comprising:

an authentication unit connected to the call processing unit, to receive network access identifier information for authentication from the terminal through the call processing unit, and to determine authenticity based on the corresponding network access identifier information in accordance with whether the corresponding connection terminal is a terminal registered in the private evolution data only wireless network, and to send a mobile node identifier value as a return value to the terminal through the call processing unit and the relay unit, and to provide the mobile node identifier value of the connection

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9 terminal to the session information processing unit, the session information processing
10 unit storing the mobile node identifier value of the connection terminal along with the
11 session information in its database.

1 28. (New) The apparatus according to claim 26, wherein the session information
2 processing unit sends private evolution data only wireless network session information of
3 the corresponding connection terminal stored in the database to the call processing unit in
4 response to a call connection request signal being received from the terminal entering the
5 private evolution data only wireless network and the new private network session having
6 been established with the terminal.

1 29. (New) The apparatus according to claim 26, wherein the call processing unit
2 establishes a traffic channel to the corresponding connection terminal according to the
3 private evolution data only wireless network session information of the connection
4 terminal provided from the session information processing unit in response to a call
5 connection request signal being received from the terminal entering the private evolution
6 data only wireless network and the new private network session with the terminal having
7 been established.

1 30. (New) The apparatus according to claim 26, wherein the call processing unit
2 comprises a routing module to determine, based on temporary identifier information

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3 contained in the call connection request signal, whether a corresponding terminal
4 connection call is a private evolution data only wireless network connection call or a
5 public evolution data only wireless network connection call in response to a call
6 connection request signal being received through the relay unit from the terminal entering
7 the private evolution data only wireless network and the new private network session
8 with the terminal having been established, and to route the corresponding connection call
9 to the private evolution data only wireless network or the public evolution data only
10 wireless network according to the result of the determination.

1 31. (New) The apparatus according to claim 26, further comprising:

2 a data packet service node to provide a data service over the Intranet in the private
3 evolution data only wireless network to the corresponding terminal through the call
4 processing unit in response to a traffic channel to the corresponding terminal being
5 allocated from the call processing unit and call processing being implemented.

1 32. (New) The apparatus according to claim 27, wherein the session information
2 processing unit sends the private evolution data only wireless network session
3 information of the corresponding connection terminal stored in the database to the call
4 processing unit in response to a call connection request signal being received from the
5 terminal entering the private evolution data only wireless network and the new private
6 network session has been established with the terminal.

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1 33. (New) The apparatus according to claim 27, wherein the call processing unit
2 establishes a traffic channel to the corresponding connection terminal in accordance with
3 the private evolution data only wireless network session information of the connection
4 terminal from the session information processing unit in response to a call connection
5 request signal being received from the terminal entering the private evolution data only
6 wireless network and the new private network session with the terminal having been
7 established.

1 34. (New) The apparatus according to claim 27, wherein the call processing unit
2 comprises a routing module, the routing module determining whether a corresponding
3 terminal connection call is a private evolution data only wireless network connection call
4 or a public evolution data only wireless network connection call, based on temporary
5 identifier information contained in the call connection request signal, in response to a call
6 connection request signal being received through the relay unit from the terminal entering
7 the private evolution data only wireless network and the new private network session
8 with the terminal having been established, and the routing module routing the
9 corresponding connection call to the private evolution data only wireless network or the
10 public evolution data only wireless network according to the routing module determining
11 result.

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1 35. (New) The apparatus according to claim 34, further comprising:
2 a data packet service node to provide a data service over the Intranet in the private
3 evolution data only wireless network to the corresponding terminal through the call
4 processing unit in response to a traffic channel to the corresponding terminal being
5 allocated from the call processing unit and call processing being implemented.

1 36. (New) The apparatus according to claim 27, further comprising:
2 a data packet service node to provide a data service over the Intranet in the private
3 evolution data only wireless network to the corresponding terminal through the call
4 processing unit in response to a traffic channel to the corresponding terminal being
5 allocated from the call processing unit and call processing being implemented.

1 37. (New) A method of processing a call in a private evolution data only wireless
2 network system, the private evolution data only wireless network system being interfaced
3 with a public evolution data only wireless network system including a public data
4 location register, the private evolution data only wireless network system including a
5 private base station, a private control station, a private data location register, a private
6 authentication processor and a data service node, the method comprising:
7 the private base station sending a unicast access terminal identifier request
8 message that has been sent from a terminal entering a private evolution data only wireless
9 network to the private data location register through the private control station, the

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10 unicast access terminal identifier request message including a unicast access terminal
11 identifier, allocated in the public evolution data only wireless network in response to the
12 unicast access terminal identifier request message being received;

13 the data location register analyzing whether the unicast access terminal identifier
14 included in the unicast access terminal identifier request message sent through the private
15 control station is a unicast access terminal identifier allocated by the data location
16 register, and sending to the private control station a unicast access terminal identifier
17 response message for notifying that it is not the unicast access terminal identifier
18 allocated by the data location register when it is not the unicast access terminal identifier
19 allocated by the data location register;

20 the private control station receiving a unicast access terminal identifier response
21 message sent from the private data location register closing a session created in the
22 terminal and the public evolution data only wireless network in response to the received
23 unicast access terminal identifier response message;

24 the private data location register allocating a new unicast access terminal
25 identifier, establishing a private evolution data only wireless network session with the
26 terminal, and storing the session in a database of the private data location register, in
27 response to the unicast access terminal identifier request message including random
28 unicast access terminal identifier information from the terminal being sent through the
29 private base station and the private control station to the private data location register
30 after the session has been closed; and



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31 the private authentication processor performing private authentication of the
32 terminal using a mobile node identifier value sent from the terminal in response to the
33 new private network session being established, and then storing the mobile node
34 identifier value of the corresponding terminal along with session information in the
35 database of the private data location register.

1 38. (New) The method according to claim 37, further comprising:
2 the private base station sending a call connection request signal from the terminal
3 to the private control station in response to a call connection request from the terminal
4 entering the private evolution data only wireless network and the private network session
5 with the terminal having been established;

6 the private control station determining whether the call connection request signal
7 sent from the private base station is a private evolution data only wireless network
8 connection request signal or a public evolution data only wireless network connection
9 request signal;

10 the private control station requesting session information to the private data
11 location register in response to the connection request signal from the corresponding
12 terminal being the private evolution data only wireless network connection request
13 signal;

14 the private data location register retrieving session information of the
15 corresponding terminal stored in the database of the private data location register to send

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16 the session information to the private control station; and

17 the private control station allocating a traffic channel to the terminal using the
18 session information sent from the private data location register, and performing data
19 service over the allocated traffic channel.

1 39. (New) The method according to claim 38, further comprising:

2 the private control station determining whether the call connection request signal
3 sent from the private base station is a private evolution data only wireless network
4 connection request signal or a public evolution data only wireless network connection
5 request signal, and whether the call connection request signal sent from the private base
6 station is the public evolution data only wireless network connection request signal, and
7 the private control station sending the session information request signal of the
8 corresponding terminal according to the call connection request signal to the data
9 location register in the public evolution data only wireless network;

10 the public data location register determining whether the session information of
11 the corresponding terminal is the session information allocated in the public evolution
12 data only wireless network in response to the session information request sent through the
13 private control station in the private evolution data only wireless network;

14 providing the private control station with a response message including an
15 unknown unicast access terminal identifier, notifying that the session information of the
16 corresponding terminal is not the session information allocated by the public evolution


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17 data only wireless network in response to the session information of the terminal not
18 being the session information allocated in the public evolution data only wireless
19 network; and

20 the private control station closing the private network session with the terminal to
21 block a connection to the public network in response to a response message provided
22 from the data location register in the public evolution data only wireless network.

1 40. (New) The method according to claim 37, further comprising:

2 the private base station sending a call connection request signal from the terminal
3 to the private control station in response to a call connection request from the terminal
4 entering the private evolution data only wireless network and the private network session
5 with the terminal having been established; and

6 the private control station determining whether the call connection request signal
7 sent from the private base station is a private evolution data only wireless network
8 connection request signal or a public evolution data only wireless network connection
9 request signal.

1 41. (New) The method according to claim 40, further comprising:

2 the private control station determining whether the call connection request signal
3 sent from the private base station is a private evolution data only wireless network
4 connection request signal or a public evolution data only wireless network connection

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5 request signal, and determining whether the call connection request signal sent from the
6 private base station is the public evolution data only wireless network connection request
7 signal, and the private control station sending the session information request signal of
8 the corresponding terminal according to the call connection request signal, to the data
9 location register in the public evolution data only wireless network.

1 42. (New) The method according to claim 41, further comprising:

2 the public data location register determining whether the session information of
3 the corresponding terminal is the session information allocated in the public evolution
4 data only wireless network in response to the session information request sent through the
5 private control station in the private evolution data only wireless network;

6 providing the private control station with a response message, unknown unicast
7 access terminal identifier, notifying that the session information of the corresponding
8 terminal is not the session information allocated by the public evolution data only
9 wireless network in response to the session information of the terminal not being the
10 session information allocated in the public evolution data only wireless network; and

11 the private control station closing the private network session with the terminal to
12 block a connection to the public network in response to a response message provided
13 from the data location register in the public evolution data only wireless network.

1 43. (New) A method of processing a call in a private evolution data only wireless

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2 network system, the method comprising:

3 receiving a unicast access terminal identifier request message from a terminal
4 entering a private evolution data only wireless network, the unicast access terminal
5 identifier request message including a unicast access terminal identifier, an old unicast
6 access terminal identifier, allocated in a public evolution data only wireless network;

7 determining whether the old unicast access terminal identifier included in the
8 received unicast access terminal identifier request message is a unicast access terminal
9 identifier allocated in the private evolution data only wireless network;

10 closing a public evolution data only wireless network session established with the
11 terminal in response to a determination that the unicast access terminal identifier
12 included in the sent unicast access terminal identifier request message is not the unicast
13 access terminal identifier allocated in the private evolution data only wireless network;

14 establishing a private evolution data only wireless network session with the
15 terminal, and storing the session in a database in response to a unicast access terminal
16 identifier request message including random unicast access terminal identifier
17 information received from the terminal after the session has been closed, and allocating a
18 new unicast access terminal identifier according to the received random unicast access
19 terminal identifier information; and

20 performing private authentication for the corresponding terminal using the
21 received mobile node identifier of the terminal, and then storing the mobile node
22 identifier value of the corresponding terminal along with the session information in the

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23 database in response to the new private evolution data only wireless network session
24 being established, sending an authentication request signal to the terminal, and in
25 response to a mobile node identifier value of the terminal needed for authentication being
26 received from the terminal.

1 44. (New) The method according to claim 43, further comprising:

2 determining whether a corresponding call connection request signal is a private
3 evolution data only wireless network connection request signal or a public evolution data
4 only wireless network connection request signal in response to a call connection request
5 from the terminal entering the private evolution data only wireless network and a private
6 session has been established with the terminal;

7 retrieving session information of the corresponding terminal stored in the database
8 in response to a determination that the connection request signal from the corresponding
9 terminal is the private evolution data only wireless network connection request signal;
10 and

11 allocating a traffic channel to the terminal according to the retrieved session
12 information of the corresponding terminal and performing data service through the
13 allocated traffic channel.

1 45. (New) The method according to claim 43, further comprising:

2 determining whether a corresponding call connection request signal is a private

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3 evolution data only wireless network connection request signal or a public evolution data
4 only wireless network connection request signal in response to a call connection request
5 from the terminal entering the private evolution data only wireless network and a private
6 session has been established with the terminal.

1 46. (New) The method according to claim 44, further comprising:
2 requesting the public evolution data only wireless network to provide a session
3 information request signal of a corresponding terminal according to the call connection
4 request signal in response to the call connection request signal from the terminal being
5 the public evolution data only wireless network connection request signal; and
6 closing the private network session with the terminal to block the connection to
7 the public network in response to the response message provided from the public
8 evolution data only wireless network upon receiving a response message from the public
9 evolution data only wireless network indicating that the session information of the
10 corresponding terminal is not the session information allocated in the public evolution
11 data only wireless network in response to the request.

1 47. (New) The method according to claim 44, further comprising:
2 requesting the public evolution data only wireless network to provide a session
3 information request signal of a corresponding terminal according to the call connection
4 request signal in response to the call connection request signal from the terminal being

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the public evolution data only wireless network connection request signal.

48. (New) An apparatus to process a data call in a private wireless network system, the apparatus comprising:

a first unit to transfer a request message in response to the request message being received from a terminal entering a private wireless network, the request message including a public network unicast access terminal identifier allocated in a public wireless network;

a second unit to generate a new private wireless network request signal in response to the request message transferred by the first unit, and, in response to a response message, including an unknown unicast access terminal identifier, corresponding to the request signal has been received, closing a session created at the terminal and the public network according to the received message, and to transfer a new request message provided from the terminal through the first unit, the new request message including random unicast access terminal identifier information, and to send an authentication request signal to the connection terminal through the first unit in response to a private network session being established with the terminal according to a newly allocated unicast access terminal identifier; and

a third unit to provide a response message to the call processing unit in response to the private wireless network request signal generated by the second unit, to allocate the new unicast access terminal identifier to the connection terminal according to the new

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20 unicast access terminal identifier request message transferred from the call processing
21 unit to establish the private wireless network session with the terminal, and to then store
22 the established session information in a database in a memory thereof.